

DOCKET NO.: ISIS0002-102 (ISIS-4313)

PATENT

REMARKS

Claims 78-81, 94-102 and 106-116 are pending in the present application. Claims 43-46, 68-77, 82, 89-92, 103-105, and 107-116 have been cancelled herein without prejudice to their presentation in another application. Claims 78-81, 93-102, and 106 have been amended herein. Upon entry of the present Amendment, claims 78-81, 93-102 and 106 will be pending.

Applicant's undersigned representative would like to take this opportunity to thank the Examiner for taking the time to interview the present application on February 23, 2004.

The claims have been amended to delete the term "enzyme." The claims have not been narrowed because of this amendment.

The claims have also been amended to recite that the first and second oligonucleotides are not covalently linked. Support for this amendment can be found throughout the specification. For example, page 15, lines 4-12 of the specification (referring to Figure 4) teaches that a duplex consisting of the Ha-ras targeted 9 RNA gapmer oligonucleotide was annealed to a ³²P-labelled RNA complement. This duplex was incubated with T24 cytosolic protein fraction and, after digestion, the products (indicated by four arrows) were resolved on a denaturing polyacrylamide gel. As referred to in this portion of the specification, the schematic of the duplex (see right side of Figure 4) shows two oligonucleotides that form a duplex but which are not covalently linked. Further, if the duplex comprised two oligonucleotides linked by a linker, then the digestion products would have been indicated by three arrows and not four.

In addition, page 15, line 30 to page 16, line 20 (referring to Figures 7 and 8) teaches that dsRNase substrates were created by "preannealing" antisense and sense oligonucleotides. Thus, the antisense and sense oligonucleotides (i.e., two oligonucleotides) were not covalently linked at the time of preannealing. Example 28 on pages 99-101 of the specification teaches 5'-end labeling of the sense strand with ³²P. Duplexes were then prepared by mixing 10 nM antisense oligonucleotide with 10⁵ cpm ³²P-labelled sense oligonucleotide (i.e., oligonucleotides not covalently linked). Further, the denaturing gel electrophoresis (see Figure 8) versus the native gel electrophoresis (see Figure 7) reveals additional bands which indicates a lack of a covalent linkage between the sense and antisense strands of the duplex.

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In addition, Table 1 at page 93 of the specification recites several duplexes. Each of the depicted duplexes shows a first oligonucleotide and a second oligonucleotide that are not covalently linked. Thus, the application, as filed, provides ample support for amending the claims to recite that the first and second oligonucleotides "are not covalently linked" such that a person skilled in the art would clearly recognize that Applicant had possession of the claimed invention. Thus, no new matter has been added.

Information Disclosure Statement

Applicant thanks the Examiner for initialing and returning "Sheet 12 of 15" of the Information Disclosure Statement.

I. The Claimed Embodiments Are Novel

Claims 78-81 and 94-102 remain rejected under 35 U.S.C. § 102(b) as allegedly anticipated by International Publication WO 94/01550 (hereinafter, the "Agrawal reference"). The Office alleges that the Agrawal reference discloses "double stranded RNAs [that] comprises a targeting sequence and a self-complementary sequence" (Office Action, page 3). Applicant respectfully traverses the rejection and requests that the rejection be reconsidered and withdrawn.

Applicant has amended the claims to recite that the two oligonucleotides "are not covalently linked," support for which can be found in the specification as described above. During the interview, it was agreed upon by the Examiner that this present amendment would distinguish the claims of the present application from the Agrawal reference. Applicant is unable to locate any portion of the Agrawal reference that teaches this feature. Indeed, the Agrawal reference teaches using nucleotide or non-nucleotide linkages between the "first" and "second" oligonucleotide regions so as to create a self-complementary sequence. In particular, the Agrawal reference reports that the target hybridizing region is connected to the self-complementary region by various linkers including non-nucleic acid linkers.

In view of the foregoing, the Agrawal reference does not anticipate the claims. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102(b) be withdrawn.

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II. Conclusion

Applicant believes the claims are in condition for allowance. An early Notice of Allowance is therefore earnestly solicited. Applicant invites the Examiner to contact the undersigned at (215) 665-6914 to clarify any unresolved issues raised by this response.

Respectfully submitted,



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